ABSTRACT

A modified JAVA(TM) execution environment is described. The modified environment supports multiple JAVA(TM) applications on a single JAVA(TM) virtual machine (JVM). This modified environment provides significant memory and performance improvements when running multiple applications on a single computer system. Notably, no changes are needed to the source code of an application to take advantage of the modified environment. Further, embodiments of the invention may support shared access to base classes through the use of overlays. Additionally, system resource permissions can be enforced based upon the user permissions associated with a running application. Notably, embodiments of the invention allow multiple applications to share the abstract window toolkit (AWT) on a per display basis. Since only a single garbage collection routine is necessary, applications see improved performance relative to running in different JVMs. Further, the shared base classes eliminate significant memory overhead.